LEVENSTERN, O.L., kandidat tekhnicheskikh nauk; **KRESTOVNIKOV**, G.A., inzhener; **OSIPYAN**, A.V., kandidat tekhnicheskikh nauk, redaktor; **KOZLOVSKIY**, I.S., kandidat tekhnicheskikh nauk, redaktor; **ZIL'BERBERG**, Ya.G., inzhener, redaktor; **BRILING**, N.R., professor, doktor tekhnicheskikh nauk, redaktor; **KALISH**, G.G., doktor tekhnicheskikh nauk, professor, redaktor; **RAMAYYA**, K.S., doktor tekhnicheskikh nauk, redaktor; **LIPGART**, A.A., professor, redaktor; **PRYADILOV**, V.I., kandidat tekhnicheskikh nauk, redaktor; **ROZANOV**, V.G., kandidat tekhnicheskikh nauk, redaktor; **CHISTOZVONOV**, S.B., inzhener, redaktor; **SHTEYNGART**, M.D., redaktor; **UVAROVA**, A.F., tekhnicheskiy redaktor.

[Heating of brake linings in passenger cars] Nagrev tormoznykh nakladok legkovykh avtomobilei. Moskva, Gos.nauchno-tekh.izd-vo mashinostroit. lit-ry, 1955. 35 p. (Moscow. Gosudarstvennyi nauchno-issledovatel'skii avtomobil'nyi i avtomotornyi institut. Trudy, no.78). (MIRA 9:7)

1.Direktor Nauchno-issledovatel'skogo avtomotornogo instituta (for Osipyan).2.Zamestitel' direktora Nauchno-issledovatel'skogo avtomotornogo instituta (for Kozlovskiy).3.Chlen-korrespondent AN SSSR (for Briling).
(Automobiles--Brakes)

KULIKOV, N.K., doktor tekhnicheskikh nauk; OSIPYAN, A.V., kandidat tekhnicheskikh nauk, redaktor; KOZLOVSKIY, I.S., kandidat tekhnicheskikh nauk, redaktor; ZIL'BERBERG, Ya.G., inzhener, redaktor; BRILING, N.R., doktor tekhnicheskikh nauk, professor, redaktor; KALISH, G.G., doktor tekhnicheskikh nauk, professor, redaktor; PEVZNER, Ya.M., doktor tekhnicheskikh nauk, professor, redaktor; KRUSHCHEV, M.M., doktor tekhnicheskikh nauk, professor, redaktor; RAMAYYA, K.S., doktor tekhnicheskikh nauk, professor, redaktor; LIPGART, A.A., professor, redaktor; PRYADILOV, V.I., kandidat tekhnicheskikh nauk, redaktor; ROZANOV, V.G., kandidat tekhnicheskikh nauk, redaktor; CHISTOZVONOV, S.B., inzhener, redaktor; YEGORKINA, L.I., redaktor; UVAROVA, A.F., tekhnicheskiy redaktor; BROKSH, V.V., inzhener.

[Performance of automobile wheels] Rabota avtomobil'nogo kolesa. (Moscow. Gosudarstvennyi nauchno-issledovatel'skii avtomobil'nyi i avtomotornyi institut. [Trudy] no.77) 1955 36 p. (MLRA 9:4)

1. Chlen-korrespondent AN SSSR (for Briling).
(Automobiles--Wheels)

RUDNITSKIY, N.M., kandidat tekhnicheskikh nauk; OSIPYAN, A.V., kandidat tekhni-
cheskikh nauk, redaktor; KOZLOVSKIY, I.S., kandidat tekhnicheskikh nauk,
redaktor; ZIL'BERBERG, Ya.G., inzhener, redaktor; BRILING, N.R., doktor
tekhnicheskikh nauk, professor, redaktor; KALISH, G.G., doktor tekhniche-
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nauk, professor, redaktor; KRUSHCHEV, M.M., doktor tekhnicheskikh nauk,
professor, redaktor; RAMAYYA, K.S., doktor tekhnicheskikh nauk, redaktor;
LIPGART, A.A., professor, redaktor; PRYADILOV, V.I., kandidat tekhniche-
skikh nauk, redaktor; ROZANOV, V.G., kandidat tekhnicheskikh nauk, re-
daktor; CHISTOZVONOV, S.B., inzhener; BROKSH, V.V., inzhener, redaktor;
BAUMAN, I.M., redaktor; UVAROVA, A.F., tekhnicheskiy redaktor.

[Endurance of materials for automobile engine sliding friction bearings]
Vynoslivost' materialov dlia podshipnikov skol'zheniia automobil'nykh
dvigatelei. (Moscow. Gosudarstvennyi nauchno-issledovatel'skii i avtomobil'-
nyi institut. [Trudy], no.76) 1955 54 p. (MIRA 9:4)

1. Direktor Nauchno-issledovatel'skogo avtomotornogo instituta (for Osi-
pyan). 2. Chlen-korrespondent AN SSSR (for Briling).
(Bearings (Machinery)) (Automobiles--Engines)

RAMAYYA, K.S., doktor tekhnicheskikh nauk; SIL'S, R.Kh., inzhener; BEN-YAKIR, R.D., inzhener; KOZLOVSKIY, I.S., kandidat tekhnicheskikh nauk, zamestitel' otvetsvtennogo redaktora; ZIL'BERBERG, Ya.G., inzhener, sekretar'; BRILING, N.R., professor, doktor tekhnicheskih nauk; KALISH, G.G., professor, doktor tekhnicheskikh nauk; PEVZNER, Ya.M., professor, doktor tekhnicheskikh nauk; KHRUSHCHEV, M.M., professor, doktor tekhnicheskikh nauk; LIPGART, A.A.; professor; PRYADILOV, V.I., kandidat tekhnicheskikh nauk; ROZANOV, V.S., kandidat tekhnicheskikh nauk; CHISTOZVONOV, S.B., inzhener; BROKSH, V.V., zavedyuyshchiy redaktsiyey, inzhener; UVAROVA, A.F., tekhnicheskiy redaktor; OSIPYAN, A.F., kandidat tekhnicheskikh nauk, otvetstvennyy redaktor.

[Method of determining the potential corrosion properties of lubricants] Metod opredeleniia potentsial'noi korrozionnosti masel. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry.1956 49 p. (Moscow. Gosudarstvennyi nauchno-issledovatel'skii avtomobil'nyi i avtomotornyi institut. [Trudy], no. 80) (MLRA 10:1)

1. Direktor Nauchno-issledovatel'skogo avtomotornogo instituta (for Osipyan). 2.Zamestitel' direktora Nauchno-issledovatel'skogo avtomotornogo instituta po nauchnoy rabote (for Kozlovskiy).3.Chlen-korrespondent Akademii nauk SSSR (for Briling).
(Lubrication and lubricants) (Corrosion and anticorrosives)

RAMAYYA, K.S.

PAPOK, Konstantin Karlovich, doktor tekhnicheskikh nauk; VIPPER, Andrey Borisovich, kandidat tekhnicheskikh nauk; RAMAYYA, K.S., doktor tekhnicheskikh nauk, retsenzent; PUCHKOV, N.G., kandidat tekhnicheskikh nauk, redaktor; UVAROVA, A.F., tekhnicheskiy redaktor

[Carbon diposit, films and residues in automobile engines] Nagary, lakovye otlozheniia i osadki v avtomobil'nykh dvigateliakh. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1956. 153 p. (MLRA 10:3)
(Automobiles--Engines)

RAMAYYA, K.S.

CHAPKEVICH, V.A., kandidat tekhnicheskikh nauk; OSIPYAN, A.V., kandidat
tekhnicheskikh nauk, redaktor; KOZLOVSKIY I.S., kandidat tekhni-
cheskikh nauk, redaktor; ZIL'BERBERG, Ya.G., inzhener; redaktor; BRILING,
N.R., professor, doktor tekhnicheskikh nauk, redaktor; KALISH, G.G.,
professor, doktor tekhnicheskikh nauk, redaktor; PEVZNER, Ya.M.
professor, doktor tekhnicheskikh nauk, redaktor; KHRUSHCHOV, M.M.,
doktor tekhnicheskikh nauk, professor, redaktor; RAMAYYA, K.S.,
doktor tekhnicheskikh nauk, redaktor; LIPGART, A.A., professor,
redaktor; PRYADILOV, V.I., kandidat tekhnicheskikh nauk, redaktor;
ROZANOV, V.G., kandidat tekhnicheskikh nauk;redaktor; CHISTOZVONOV,
S.B., inzhener, redaktor; UVAROVA, A.F., tekhnicheskiy redaktor.

[Investigation of the operation of the IaAZ engine] Issledovanie
rabochego protsessa dvigatelia IaAZ. Moskva, Gos.nauchno-tekhn.
izd-vo mashino-stroit.lit-ry, 1956. 41 p. (Moscow. Gosudarstven-
nyi nauchno-issledovatel'skii avtomobil'nyi i avtomotornyi institut.
[Trudy], no.79) (MIRA 10:3)

1. Direktor Nauchno-issledovatel'skogo avtomobil'nogo insituta(for
Osipyan) 2. Zamestitel' direktora Nauchno-issledovatel'skogo
avtomobil'nogo instituta po nauchnoy rabote (for Kozlovskiy)
3.Chlen-korrespondent AN SSSR (for Briling).
(Automobiles--Engines)

TRAKTOVENKO, I.A., kand. tekhn. nauk; VEDENYAPIN, G.A., otv. red.; KOZLOVSKIY, I.S., kand. tekhn. nauk. red.; ZIL'BERBERG, Ya.G. inzh. zamestitel' otv. red.; BRILING, N.R., doktor tekhn. nauk, prof., red.; KALISH, G.G., doktor tekhn. nauk, prof., red.; PEVZNER, Ya.M., doktor tekhn. nauk, prof., red.; KHRUSHCHEV, M.M., doktor tekhn. nauk, prof., red.; ~~RAMAIYA, K.S.,~~ doktor tekhn. nauk, red.; LIPGART, A.A., prof., red.; PRYADILOV, V.I., kand. tekhn. nauk, red.; ROZANOV, V.G., kand. tekhn. nauk, red.; CHISTOZVONOV, S.B., inzh., red.; SHIKIN, S.T., tekhn. red.

[Investigating the effect of the cetane number of diesel fuels on the performance of engines] Issledovanie vliianiia tsetanovogo chisla topliva no rabotu dvigatelia. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroitel'noi lit-ry, 1957. 30 p. (Moscow. Gosudarstvennyi nauchno-issledovatel'skii avtomobil'nyi i avtomotornyi institut. [Trudy], no.83). (MIRA 10:12)

1. Direktor Gosudarstvennogo soyuznogo ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skogo avtomobil'nogo i avtomotornogo instituta (for Vedenyapin). 2. Zamestitel' direktora po nauchnoy rabote Gosudarstvennogo soyuznogo ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skogo avtomobil'nogo i avtomotornogo instituta (for Kozlovskiy). 3. Chlen-korrespondent AN SSSR (for Briling).
(Diesel fuel) (Diesel engine)

SKOTNIKOV, Viktor Vasil'yevich; VEDENYAPIN, G.A.,red.; LIPGART, A.A., otv. red.; BORISOV, S.G.,red.; BRISKIN, M.I.,red.; DYBOV, O.V.,red.; ZIL'BERG, Ya. G.,red.; KOZLOVSKIY, I.S.,red.; LOZAR', A.S.,red.; LUNEV, I.S., red.; PEVZNER, Ya.M.,red.; PRYADILOV, V.I.,red.; RAMAYYA, K.S.,red.; SAMOL', G.I.,red.; SEDOVA, Ye.V.,red.; KHANIN, N.S.,red.; CHAPAYEV, A.A.red.; CHISTOZVONOV, S.B.,red.; SHKOL'NIKOV, E.M.,red.; YEGORKINA, L.I.,red.izd-va; SMIRNOVA, G.V.,tekhn.red.

[Intermediate transformation and temper brittleness of automobile body steels] Promezhutochnoe prevrashchenie i otpusknaia khrupkost' v konstruktsionnykh avtomobil'nykh staliakh. Moskva, Gos.nauchno-tekhn. izd-vo mashinostroit. lit-ry 1958. 74 p. (Gosudarstvennyi nauchno-issledovatel'skii avtomobil'nyi i avtomotornyi institut Trudy, no.85) (MIRA 12:2)
(Steel, Automobile--Metallography)

LYSYKH, T.S., kand.tekhn.nauk; PASHIN, M.A., red.; LIPGART, A.A., red.; AL'PEROVICH, A.G., red.; BORISOV, S.G., red.; BRISKIN, M.I., red.; DYBOV, O.V., red.; ZIL'BERBERG, Ya.G., red.; LOZAR', A.S., red.; LUNEV, I.S., red.; NAGAYEV, P.V., red.; PEVZNER, N.M., red.; PRYADILOV, V.I., red.; RAMAYYA, K.S., red.; SAMOL', G.I., red.; SEDOVA, Ye.V., red.; TAMURCHI, O.V., red.; KHANIN, N.S., red.; CHAPCHAYEV, A.A., red.; CHISTOZVONOV, S.B., red.; SHKOL'NIKOV, B.M., red.; LEZHNEVA, G.V., red.izd-va; SMIRNOVA, G.V., tekhn.red.

[Design and investigation of performance of power disk brakes] Issledovanie raboty diskovykh tormozov s usileniem i metod ikh rascheta. Moskva, Gos.nauchno-issledovatel'skii avtomobil'noi i avtomotornyi institut. Trudy, no.86) (MIRA 12:8)

1. Gosudarstvennyy soyuznyy ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skiy avtomobil'nyy i avtomotornyy institut. (Automobiles--Brakes)

КАЛИНУУН, К.-S.

PHASE I BOOK EXPLOITATION SOV/5055

Vsesoyuznaya konferentsiya po treniyu i iznosu v mashinakh. 3d, 1958.

Gidrodinamicheskaya teoriya smazki. Opory skol'zheniya. Smazka i smazochnyye materialy (Hydrodynamic Theory of Lubrication. Slip Bearings. Lubrication and Lubricant Materials) Moscow. Izd-vo AN SSSR. 422 p. Errata slip inserted. 3,500 copies printed. (Series: Its: Trudy, v. 3)

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinovedeniya. Resp. Eds. for the Section "Hydrodynamic Theory of Lubrication and Slip Bearings": Ye. M. Gut'yar, Professor, Doctor of Technical Sciences, and A. K. D'yachkov, Professor, Doctor of Technical Sciences; Resp. Ed. for the Section, "Lubrication and Lubricant Materials": G. V. Vinogradov, Professor, Doctor of Chemical Sciences; Ed. of Publishing House: M. Ya. Klebanov; Tech. Ed.: O. M. Gus'kova.

PURPOSE: This collection of articles is intended for practicing engineers and research scientists.

COVERAGE: The collection, published by the Institut mashinovedeniya AN SSSR (Institute of Science of Machines, Academy of Sciences USSR) contains papers presented at the III Vsesoyuznaya konferentsiya po treniyu i iznosu v mashinakh (Third All-Union Conference on Friction and Wear in Machines) which was held April 9-15, 1958. Problems discussed were in 1) Hydrodynamic Theory of Lubrication and

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Hydrodynamic Theory (Cont.) SOV/5055

Kuliyev, A. M. Results of the Work of the AzNII NP (Azerbaydzhan Scientific Research Institute of the Petroleum Industry) in the Field of Synthesis, Investigation, and Application of Additives to Lubricating Oils 366

Puchkov, N. G., M. S. Borovaya, and V. D. Reznikov. Change in the Chemical Composition and in the Operating Properties of Oils During Use in an Engine 373

[illegible], and R. Kh. Sil's. Mechanism of the Corrosive Activity of Oils and the Protective Action of Additives 381

Fuks, G. I., N. Ye. Gal'tsova, P. Ya. Kiryushov, A. S. Mikhaylyuk, and I. I. Uss. On the Applicability of Synthetic Esters as Lubricant Materials 386

Fuks, G. I., and M. I. Kaverina. Lubricating Capacity and Properties of the Boundary Layers of Oils (Physical Significance and Characteristics of the Lubricating Capacity of Oils) 397

Klimov, K. I., and P. P. Zarudniy. Mechanical Destruction of Solutions of Polymers in a Flow (Published in 1959 under the title: "Mechanical Destruction of Solutions of Polyisobutylene in Mineral Oils") ("Khimiya i tekhnologiya topliv i masel", No. 2, 1959) 408

Pavlov, V. P. Elastic-Endurance Properties of Lubricant Materials ("Izv. AN SSSR, OTN." "Mekhanika i mashinostroyeniye", No. 2, 1959) 408

Pirsanova, Ye. N., and S. G. Arabyan. Development of an Accelerated-Engine Method for Testing Oils for Diesel Tractors ("Traktory i sel'khozmashiny," No. 9, 1958) 408

~~Card~~ 15/17

RAMAYYA, K. S.

66557

19850

SOV/81-59-15-53?65

Translation from: Referativnyy Zhurnal. Khimiya, 1959, Nr 15, p 230 (USSR)

AUTHORS: Ramayya, K.S., Sil's, R.Kh.

TITLE: A Method for Determining the Potential Corrosion Aggressiveness of Oil

PERIODICAL: V sb.: Metody issledovaniya ingibitorov korrozii metallov (Vses. sov. n.-i. khimiko-tekhn. o-v, Nr 7) Moscow, 1958, pp 63 -

ABSTRACT: An improved device DK-2 NAMI has been proposed for determining the corrosion aggressiveness under the conditions of its oxidation. The tested oil is poured into an L-shaped retort and a round metal plate (disk) is also placed there. It is fastened on the tubular foot of a glass bulb which is inserted into the retort. The retort receives a variable inclination by means of an adapter of the revolving type which revolves around an inclined axis. As a result the disk is periodically washed by oil and air. A stirrer for mixing the liquid in the thermostat revolves separately from the adapter or together with it. The temperature in the thermostat is regulated by a thermoregulator or by an autotransformer. In this case a free access of air into the retort with the disk is ensured. The criterion of the aggressiveness of

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66559

SOV/[illegible]

[illegible] a Potential Corrosion Aggressiveness of [illegible]

[illegible] Conditions of the tests: inclination of the [illegible] from the bottom of the retort [illegible] temperature [illegible] °C; surface of the disk [illegible] ± [illegible] quantity [illegible] ± [illegible] the rate of corrosion is [illegible] times faster than by [illegible] devices [illegible] tests in [illegible] institutes [illegible] and have [illegible] more correct and differentiated [illegible] aggressiveness of various oils than by [illegible]'s method [illegible] test duration of [illegible] hours has been standardized (GOST [illegible])

[illegible]

Card [illegible]

RAMAYYA, K.S., doktor tekhn.nauk; LEBEDEV, S.A., kand.tekhn.nauk;
ZAVEL'SKIY, V.S.; GRIGOR'YEV, M.A.

Effect of oil impurity on the wear of engines. Avt.prom. no.1:
8-11 Ja '59. (MIRA 12:1)

1. Gosudarstvennyy soyuznyy ordena Trudovogo Krasnogo Znameni
nauchno-issledovatel'skiy avtomobil'nyy i avtomotornyy institut.
(Automobiles--Lubrication)

PETRUSHOV, V.A., inzh.; PASHIN, M.A., red.; LIPGART, A.A., otv.red.; AL'PEROVICH, A.G., red.; BORISOV, S.G., red.; BRISKIN, M.I., red.; DYBOV, O.V., red.; ZIL'BERBERG, Ya.G., red.; LOZAR', A.S., red; LUNEV, I.S., red.; NAGAYEV, P.V., red.; PEVZNER, Ya.M., red.; PRYADILOV, V.I., red.; RAMAYYA, K.S., red.; SAMOL', G.I., red.; SEDOVA, Ye.V., red.; TAMRUCHI, O.V., red.; KHANIN, N.S., red.; CHAPCHAYEV, A.A., red.; CHISTOZVONOV, S.B., red.; SHKOL'NIKOV, E.M., red.; YEGORKINA, L.I., red.izd-va; GORDEYEVA, L.P., tekhn. red.

[Operational analysis of the multiplate friction transformer] Analiz raboty mnogodiskovykh friktsionnykh transformatorov. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroitel'noi lit-ry, 1960. 79 p.(Moscow. Gosudarstvennyi nauchno-issledovatel'skii avtomobil'nyi i avtomotornyi institut [Trudy], no.90). (MIRA 13:8)

(Motor vehicles--Transmission devices)

RAMAYYA, K.S., doktor tekhn.nauk; ZAVEL'SKIY, V.S.

Effect of lubricant additives on the corrosive wear of bearing alloys. Avt.prom. no.3:21-24 Mr '61. (MIRA 14:3)

1. Gosudarstvennyy soyuznyy ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skiy avtomobil'nyy i avtomotornyy institut.
(Automobiles--Lubrication)

S/081/62/000/006/085/117
B167/B101

11.9700

AUTHORS: Ramayya, K. S., Sil's, R. Kh.

TITLE: Effect of an oxidation catalyst in oil on the anticorrosion efficiency of additives containing various functional groups

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 6, 1962, 540-541, abstract 6M258 (Sb. "Prisadki k maslam i toplivam". M., Gostoptekhizdat, 1961, 223-227)

TEXT: Oil oxidation experiments were carried out on a ДК-2 (DK-2) apparatus of NAMI at 140°C over a period of 25 hours, with standard lead plates whose weight loss was intermittently determined. Oils from the following sources were studied: sulfur naphthas containing natural oxidation inhibitors, oils from Baku petroleum free from natural inhibitors, and also the same oils in the presence of oxidation catalysts (OC) (Cu stearate, Fe oleate, Cu stearate + Fe oleate, Co naphthenate, Cu stearate + Co naphthenate, at the 0.02% level), with or without additives of various kinds. The Cu, Fe, and Co salts investigated

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Effect of an oxidation catalyst in oil ... B167/B101

accelerate the corrosion of Pb during the oxidation of oils derived from sulfur-containing petroleum to approximately the value given by oils from Baku petroleum. Additives containing a sulfurized petroleum product (3% Aznii-5) or disulfide compounds (3% Tsiatim-339, 3% Aznii-7) as corrosion inhibitors cease to protect Pb from corrosion if an OC is present. Additives containing the thiophosphoric group (3 and 5% ДФ-1 (DF-1), 3% Bartiol, 0.7% Lyubrizol-1060, 3% Zintiol, 2% ДФ-11 (DF-11), 5% Gintset, 1% VNii NP-354) effectively protected Pb from corrosion for long periods of time whether or not any OC was present. Alkaline additives (1% VNii NP-350, 1.5% СБ-3 (SB-3) on the basis of ash) inhibited the corrosion of lead for a considerable time in the absence of OC, but in the presence of OC the protection was short-lived and was followed by a more vigorous attack than took place in additive-free oil. [Abstracter's note: Complete translation.]

X

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S/081/62/000/005/081/112
B162/B101

11 9706

AUTHORS: Ramayya, K. S., Borovaya, M. S., Sil's, R. Kh.

TITLE: Laboratory investigation of the antioxidizing efficiency of additives to motor oils

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 5, 1962, 528, abstract 5M214 (Sb. "Prisadki k maslam i toplivam". M., Gostoptekhizdat, 1961, 269-272)

TEXT: The results are compared of three methods of oxidation of -11 (DS-11) oil without any additive and with each of the following additives: Tsiatim-339, 3%. Tsiatim-339 alkaline, 3%. Bartiol, 3%, Bartiol alkaline, 3%. Gintset, 5 %. Oxidation methods: revised Aznii method at 200°C by absorption of O_2 to 5ml/g of oil, NAMI method (in -2 (DK-2) device) at 200°C for 50 hrs and thermooxidizing stability 9352-60 (COST 9352-60) at 250°C. With the NAMI method (the criterion is the quantity of sediment in the oxidized oil) the additives Tsiatim-339, Bartiol, and Gintset were

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Laboratory investigation ...

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B162/B101

prooxidants, Tsiatim-339 alkaline was antioxidant, and Bartiol alkaline did not change the quantity of sediment in the oxidized oil. The evaluation of the action of the additives by the Aznii method was practically the same as by the NAMI method. With the thermooxidizing stability method, an opposite evaluation to that of the first two methods was obtained, namely: all additives were antioxidants, the presence of excess alkalinity in the Tsiatim-339 and Bartiol additives causing a reduction in the antioxidant efficiency of the additives. The opposite evaluation of the action of the additives by the last method is explained by the authors as due to the fact that with this method the oxidation of the oil takes place in a thin layer, as a result of which the oxidation products formed in the oil volatilize, while in the case of oxidation in the oil (the first two methods) these products undergo condensation and polymerization with the formation of a sediment which is insoluble in light gasoline. Abstracter's note: Complete translation.

Card 2/2

L 20345-63 EPF(c)/EWP(q)/EWT(m)/EWP(b)/BDS AFFTC/ASD/APGC Pr-4 BW/WW/JD/DJ

ACCESSION NR: AT3002002 S/2664/61/000/000/0283/0290

B

AUTHORS: Ramayya, K. S.; Zavel'skiy, V. S.

TITLE: Methods of investigation of the effectiveness of additives. The effect of additives for lubricants on the corrosional wear of bearing alloys.

SOURCE: Prisadki k maslam i toplivam; trudy nauchno-tekhnicheskogo soveshchaniya. Moscow, Gostoptekhizdat, 1961, 283-290.

TOPIC TAGS: lubricant, lubrication, additive, oil, bearing, corrosion, wear, Co, Pb, Sn, Sb, babbitt, alloy, SOS6-6, B-83, TsIATIM-330, naks, TsIATIM-339, DF-1, IPS-NAMI, naphthanate, sulfonate, diphosphoric, anticorrosion, antiwear.

ABSTRACT: The paper describes an experimental investigation intended to clarify the effect of lubricant additives on the corrosional wear of the alloy SOS6-6, which contains 88% Pb, 6% Sn, and 6% Sb, which is less stable in a corrosionally oily medium than Sn babbitts and which has encountered increasing troubles in oils with TsIATIM-330 (naks) additives. Among several automobile factories, the MZMA has issued specific instructions banning oil with naks from use in the Moskvich-407 automobile. It is postulated that the anticorrosional component in naks is not capable of coping with the corrosive aggressiveness of oils which increases with

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increasing oil oxidation. The wear of the SOS6-6 alloy was determined on the IPS-NAMI tester and was compared with the Sn babbitt B-83. Additives tested: Naks, TsIATIM-339, and DF-1. The corrosional aggressiveness of oils with these additives relative to Pb was determined in the DK-2 equipment at 140°C (GOST 8245-56) in 25-hr tests. It was found that the anticorrosion properties of naks, per se, were as high as and even higher than those of the additive TsIATIM-339 and DF-1. However, it was found that after 5-7 hrs the naks loses its anticorrosion effectiveness completely, whereupon the Co naphthanate accelerates the Pb corrosion. The dependence of the wear of bearing alloys on the characteristics of an oil were evaluated by means of the IPS NAMI equipment (schematic cross section in article). In it a cylindrical element set on a rotating shaft is compressed between frictional-wear shoes. The shoes are compressed by a statically-weight-loaded selfcentering clamping device with zero resultant side load. The corrosional aggressiveness of the oil in which the entire friction pair is immersed is evaluated by the decrease in weight of the shoes. The dependence of the rate of wear of the SOS6-6 alloy on the acid concentration of the oil (vs. time), with and without the additives tested, is shown. While the test results shown cover an acidity range far in excess of that to be anticipated in an engine (3 mg KOH), it is concluded that additives which contain sulfonated oil as an anticorrosion component are not suitable for use in engines equipped with Pb-alloy bearing inserts of SOS6-6. It is also apparent that

L 20345-63

ACCESSION NR: AT3002002

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additives of the type DF-1, in which the anticorrosion component pertains to the diphosphoric group, afford the best protection for bearings made of Pb alloys. Orig. art. has 7 figures and 1 table.

vl

ASSOCIATION: NAMI

SUBMITTED: 00 **DATE ACQ:** 23Jan63 **ENCL:** 00

SUB CODE: FL, CH, EL **NO REF SOV:** 007 **OTHER:** 001

Card 3/3

S/081/62/000/004/069/087
B138/B110

AUTHORS: Semenido, Ye. G., Ramayya, K. S., Sharapov, V. I., Sil's, R. Kh., Shchegolev, N. V.

TITLE: Low-viscosity fractions of sulfurous crudes as a base for thickened oils

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1962, 482, abstract 4M179 (Sb. "Khimiya seraorgan. soyedineniy, soderzhashchikhsya v neftyakh i nefteproduktakh. v. 4", M., Gostoptekhizdat, 1961, 217-221)

TEXT: With the aim of selecting bases for the production of thickened oils investigation has been made of the sulfur base of the Novo-Ufimka NPZ fractions which boil in the ranges 325-350°C, 325-375°C, 325-400°C and 325-425°C. The sulfurous base investigated, which has a total S content of up to 1 %, has been found to have better viscosity properties, group chemical composition, antioxidation properties etc. than the oil base used in Baku production. For this reason the sulfurous base of the Novo-Ufimka NPZ is recommended for the production of thickened oils which might then undergo motor trials. [Abstracter's note: Complete translation.]

Card 1/1

L 20678-65 EPF(c)/EWT(m)/T Pr-4 ASD(p)-3 DJ
S/0273/64/000/009/0016/0016
ACCESSION NR: AR4047605

SOURCE: Ref. zh. Dvigateli vnutrennego sgoraniya. Otdel'ny*y vy*pusk, Abs. 9.39.94

AUTHOR: Ramayya, K.S.

L

TITLE: Modern motor oils

CITED SOURCE: Tr. Tsentr. n.-i. avtomob. i avtomotorn. in-ta, vy*p. 60, 1963, 3-9

TOPIC TAGS: motor oil lubricating oil, oil additive, oil sulfur content, motor oil testing

TRANSLATION: Motor oils for modern engines normally contain several additives, each of which performs one or several functions (detergent, antioxidant, etc). The concentration of additives and their ratio in the oil depend primarily on the degree to which the engines for which the specific oil is designed are gunned, and also on the conditions under which these engines are operated. It is according to these factors that modern motor oils are classified. The sulfur content in the fuel being used is of particular importance. In order to eliminate its harmful effect on the aging of the oil, as well as on wear and corrosion of engine parts. special alkaline additives are employed (high-ash sufonates and calcium and barium phenolates), which have the effect of neutralizing the aggressive acids formed from the sulfur combustion products, However, the residual products of ash (metal-

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L 20678-65

ACCESSION NR: AR4047605

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containing) additives exert an abrasive effect on the rubbing parts of the engine. For this reason, there has been recent research in the development of no-ash motor oils with polymer additives. Of great importance to the successful development of new motor oils is their proper and correct assessment through the selection of a whole complex of laboratory and motor methods. The first gives some idea of one or several closely related properties of the oil, while the second provides a generalized estimate of many characteristics of the oil under given test conditions. Thus, motor and laboratory research supplement each other, and in the future both investigatory methods must be further developed and perfected. V. Reznikov.

SUB CODE: FP ENCL: 00

L 43089-65 EWT(m)/EPF(c)/EWA(d)/T/EWP(t)/EWP(z)/EWP(b) Pr-4 MJW/JD/WB/DJ
ACCESSION NR: AR5006826 S/0081/65/000/001/K017/K017 34
B

SOURCE: Ref. zh. Khimiya, Abs. 1K108

AUTHOR: Ramayya, K.S.; Zavel'skiy, V.S.; Ignatova, V.N.

TITLE: Effect of oil on the corrosion wear of bearing alloys

CITED SOURCE: Tr. Tsentr. n.-i. avtomob. i avtomotorn. in-ta, vyp. 60, 1963, 30-42

TOPIC TAGS: bearing alloy, alloy corrosion, alloy wear, corrosion wear, wear
determination, corrosive oil, oil additive, bearing lubricant, bearing wear

TRANSLATION: The authors describe the methods and results of tests of bearing alloys
on the IPS-NAMI friction device which was specially built for testing wear in
aggressive oil media. Tests were carried out on specimens SOS-6-6 and BK-2 alloys
in comparison with specimens of babbitt B-83 and lead S-1 in DS-11 oil, either
without additives or with the additives SB-3 (6.5%) and DF-1 (3.5%). Tests on the
IPS device were found to give an accurate idea of the relative rates of wear of
bearing alloys. N. Popova

SUB CODE: FP, MM. ENCL: 00
Card 1/1

L 9102-65 EWT(m)/EPF(c)/T/EWP(b) Pr-4 ASD(m)-3/AFETR/ASD(p)-3/SSD/
AFTC(p) JD/WB/DJ

ACCESSION NR: AT3001319 S/2933/63/005/000/0231/0235

AUTHOR: Ramayya, K. S.; R. Kh. Sil's; M. S. Borovaya; N. G. Puchkov B

TITLE: A method for determining the corrosiveness of oils from sulfur-containing crude oils and the anticorrosive effect of additives

16

SOURCE: AN SSSR. Bashkirskiy filial. Khimiya seraorganicheskikh soyedineniy, soderzhashchikhsya v neftyakh i nefteproduktakh, v. 5, 1963, 231-235

TOPIC TAGS: lubricating oil, crude oil, sulfurous crude, corrosion, oil additive, corrosion prevention, alkylphenol, alkylsalicylate, copper stearate, copper naphthenate, hydrorefining

ABSTRACT: Investigations by the standard methods give excessively low values for oil corrosiveness, and the testing conditions are too mild for the differential evaluation of the anticorrosive effectiveness of currently used additives. The corrosiveness of motor oils obtained from sulfur-containing crudes was therefore investigated using experimental conditions which were chosen in consideration of the fact that in an engine, the processes of oxidation are catalyzed by the metal surface of the machine parts as well as by the abrasion products, various highly dispersed metal particles suspended in the oil, and by organic metal salts dissolved or dispersed in the oil. Thus, in order to catalyze the

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L 9102-65

ACCESSION NR: AT3001319 2

oxidative reactions during the 25-hour experiment, copper stearate or naphthenate were added in the amount of 0.02% by weight. The results of tests with and without a catalyst at 140C on five selectively refined oil samples and five hydrorefined oil samples obtained from sulfur-containing crude oils showed that the corrosion of lead in oils from sulfurous crudes was increased considerably under the influence of a catalyst. A study of additives under similarly extreme experimental conditions showed that motor oils with almost no corrosiveness can be obtained by the combination of alkylphenol additives with alkyl-salicylates (up to 10% and higher) or by additives consisting of cleansing and inhibiting components. The effect of barium and calcium sulfonates on lead corrosion in different oils is plotted against time for different additive concentrations, and the advantages of sulfonate additives over others with respect to their stabilizing and anticorrosive effects are shown. The corrosion factor obtained by the method proposed in this paper indirectly evaluates the oxidizability of the oil; it can therefore be recommended under technical conditions for oils designed for contemporary internal combustion engines. Orig. art. has: 3 figures and 2 tables.

2

L 9102-65
ACCESSION NR: AT3001319

ASSOCIATION: Tsentral'ny*y nauchno-issledovatel'skiy avtomobil'ny*y i avtomotorny*y institut (Central Scientific Research Institute for Automobiles and Automotive Engines); Vsesoyuzny*y nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i polucheniyu iskusstvennogo zhidkogo topliva (All-Union Scientific Research Institute for the Refining of Petroleum and Gas and for the Preparation of Synthetic Liquid Fuel)

SUBMITTED: 00 ENCL: 00 SUB CODE: FP

NO REF SOV: 006 OTHER: 000

Card 3/3

PAPOK, K.K.; PUCHKOV, N.G.; RAMAYYA, K.S.

Complex laboratory methods of testing oils based on various property indices. Khim. i tekh. topl. i masel 8 no.10:53-58 O '63. (MIRA 16:11)

U

L 25618-65 EPF(c)/EWT(m)/T Pr-4 DJ

24
17
β

ACCESSION NR: AR4048479 S/0081/64/000/013/P033/P034

SOURCE: Ref. zh. Khimiya, Abs. 13P243

AUTHOR: Ramayya, K. S.; Sil's, R. Kh.; Krivoruchenko, N. T.; Bykovskaya, G. A.

TITLE: Resin formation and increase in viscosity of motor oils during their oxidation

CITED SOURCE: Tr. Tsentr. n.-i. avtomob. i avtomotorn. in-ta, vyp. 60, 1963, 59-66

TOPIC TAGS: motor oil, lubricating oil, oil viscosity, oil oxidation, resin formation, precipitate formation, oil additive, thiophosphate additive

TRANSLATION: Oils were oxidized in the DK-2 device by the NAMI method at 200C for periods up to 70 hours. The oxidized oil was diluted with petroleum ether and the precipitate formed was filtered off. From part of the filtrate, the resins were isolated by adsorption on silica gel, while from the remainder of the filtrate, an oil was obtained which contained resins but did not contain precipitate. From the viscosity (v_r) of the oxidized oil which contained resins but did not contain precipitate and the viscosity (v_0) of the same oil following

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L 25618-65

ACCESSION NR: AR4048479

removal of the resins, the authors calculated the specific viscosity as the ratio $(v_r - v_0)/v_0$. The content of precipitate and resin and the specific viscosity in the oxidized motor mineral oils AS-6, AS-9.5 and DS-11, without additives and with various additives, were then determined. The results showed that the specific viscosity is a useful index of the accumulation of resins in the oil during oxidation. The addition of thiophosphate additives (AN-22, V-353, DF-11, DF-1, Orobis-267, Monto-493) to the oil increased the precipitate formation, and in most cases also decreased the specific viscosity. Detergent additives containing Ca and Ba decreased resin formation in the oils. A. Ravikovich

SUB CODE: FP, MT ENCL: 00

Card 2/2

L 25658-65 EWT(m)/EPF(c)/EWA(d)/T/EWP(t)/EWP(b) Pr-4 JD/WB/DJ

ACCESSION NR: AR4048478 S/0081/64/000/013/P033/P033 29

21

B

SOURCE: Ref. zh. Khimiya, Abs. 13P240

AUTHOR: Ramayya, K. S.; Sil's, R. Kh.

TITLE: The corrosiveness of motor oils

CITED SOURCE: Tr. Tsentr. n.-i. avtomob. i avtomotorn. in-ta, vyp. 60, 1963, 10-29

TOPIC TAGS: motor oil, lubricating oil, oil additive, oil corrosiveness, oil stability, oil oxidation, lead corrosion, corrosion testing, oxidation catalyst, copper naphthenate, sulfonate additive

TRANSLATION: The authors demonstrate that the NAMI method (GOST 8245-56) for determining the corrosiveness of motor oils for lead (at 140C for 10 hours), in which no oxidation catalyst is used, is insufficient to characterize the behavior of the new additive-containing oils during use. They investigated the effect of the addition of various concentrations of an oxidation catalyst (copper naphthenate) on the corrosiveness of motor oils with additives of the inhibitory and alkaline types, and found that a determination of the corrosiveness of oil by the NAMI

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L 25658-65

ACCESSION NR: AR4048478 2

method (at 140C) but in the presence of 0.02% copper naphthenate (2 mg Cu/100 g oil) and for 25 hours gave a better indication as to the corrosive behavior of the oil in motors and the effect of additives than provided by the standard NAMI method; at the same time, it made possible an evaluation of the stability of the oil to oxidation. A determination of the corrosiveness of DS-11 oil with various additives by the modified NAMI method gave the following results (name of the additive followed by the weight loss of lead in g/m^2): no additive, 210; 3.5% TsIATIM-339, 190; 6% VNII NP, 185; 6.5% SB-3 (concentrate of basic barium sulfonate) 138; 10% NSK (concentrate of neutral calcium sulfonate), 120; 10% NSK plus 1.5% DF-1, 110; 6.5% SB-3 plus 3.5% AN-22, 0.8; 10% SB-3 plus 1% AN-22, 33; 6.5% SB-3 plus 3.5% DF-1, 0; 10% VNII NP-370, 3; 10% PMS plus 1.5% DF-1, 1; compositions of imported additives varying in class from "premium" to series III, 0-4.5; compositions of Soviet additives varying in class from A to E, 0-4. The authors recommend the use of the modified NAMI method for characterizing the corrosiveness and stability of motor oils (with additives) manufactured according to the international classification. A. Ravikovich.

SUB CODE: FP, MM ENCL: 00

Card 2/2

S/020/62/143/003/028/029
B144/B101

AUTHORS: Nuzhdin, N. I., Corresponding Member AS USSR, Kuznetsova, N. N., and Ramayya, L. K.

TITLE: Effect of x-ray irradiation of pregnant animals on variations in the peripheral blood of their progeny

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 3, 1962, 717-720

TEXT: The postnatal effect of a single intrauterine x-ray irradiation of 200 r at different embryonal periods was studied in mice by complete blood counts. (1) Hemoglobin quantity in newborn mice was most reduced after irradiation on the 17th day of intrauterine life (i. u. l.) (R = 8.6), but was soon restored to normal values; in 45-day old mice, irradiation on the 13th day of i. u. l. produced a significant reduction (R = 7.0) in spite of almost normal values at their birth. (2) Erythrocyte numbers varied consistently with the hemoglobin quantity. (3) Reticulocyte numbers were temporarily reduced in newborn animals irradiated on the 13th - 19th day of i. u. l. (R = 3.7 - 5.3). (4) The white blood count of newborn animals revealed no significant

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Sl December 11, 1961

Card 2/2

L 12842-63 EWT(1)/EWT(m)/BDS/ES(j) AMD/AFFTC/ASD AR/K
ACCESSION NR: AP3003232 S/0020/63/150/006/1370/1372

57
56

AUTHOR: Pomerantseva, M. D.; Ramayya, L. K.

TITLE: Comparison of the injurious effect of fast neutrons and X-rays on the tested of mice

SOURCE: AN SSSR. Doklady*, v. 150, no. 6, 1963, 1370-1372

TOPIC TAGS: fast-neutron injurious effect, X-ray, testes, Fogg-Cowing method

ABSTRACT: In experiments on 3-month-old white mice, the effect of x-irradiation (20-1600 r) on the testes was compared with that of fast-neutron irradiation. Damage was assessed from weight changes and histrologic analysis of the testes (method of Fogg and Cowing). With fast neutrons and x-rays alike, maximal weight loss, irrespective of the dosage, was observed on the 28th day after irradiation. Marked weight loss was observed even after relatively small doses. The weight loss increased with increasing doses. The point at which maximal reduction of each cell type was reached was not a function of the dosage, but recovery was slower after larger doses. On the 28th day the spermatozoa were maximally decreased, while other cell types were starting to regenerate. The histologic

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L 12842-63
ACCESSION NR: AP3003232

changes produced by both types of irradiation were similar. The relative biologic effectiveness of fast neutrons was of the same order when assessed by the weight and histologic criteria. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Institut genetiki Akademii nauk SSSR (Insititute of Genetics, Academy of Sciences SSSR)

SUBMITTED: 08Jan63 DATE ACQ: 24Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 007 OTHER: 005

Card 2/2

POMERANTSEVA, M.D.; RAMAYYA, L.K.

Genetic consequences of the action of fast neutrons on sexual cells in male mice. Dokl. AN SSSR 151 no.1:203-205 Jl '63. (MIRA 16:9)

1. Institut genetiki AN SSSR. Predstavleno akademikom A.N.Belozerskim.
(NEUTRONS—PHYSIOLOGICAL EFFECT) (SPERMATOZOA)

ACCESSION NR: AP4015098 S/0205/64/004/001/0129/0135

AUTHOR: Pomerantseva, M. D.; Ramayya, L. K.

TITLE: Radiosensitivity change in testicles of X-irradiated mice

SOURCE: Radiobiologiya, v. 4, no. 1, 1964, 129-135

TOPIC TAGS: X-irradiation, testicle radiosensitivity, fractional radiation dose, total radiation dose, radiation dose effect, radiation effect totalization, testicle weight change, testicle histological change, testicle regeneration

ABSTRACT: In the literature testicles have been found to react differently to fractional radiation than other organs in that they totalize radiation dose effects. This study attempts to determine the length of time intervals during which radiation effects may be totalized, the time required for restoration of normal radiosensitivity, and the nature of radiosensitivity at later postirradiation periods. In the first of two experimental series, white male mice were X-irradiated with a single total body dose of 200 r, and in the second series animals were X-irradiated under the same conditions with

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ACCESSION NR: AP4015098

a single 400 r dose (15 ma, 190 kv, filter 0.5 mm Cu + 0.75 mm Al, focal length 50 cm, 33 r/min). Experimental animals of both series were exposed to second radiation doses of 200 r at different intervals ranging from 2 to 140 days. On the same days control groups were irradiated with single 200 r doses for the first time and other groups with single 400 and 600 r doses. Radiation effect indices were histological investigations and weight of testicles compared to body weight on the 28th day after last exposure. Findings show that the effects of first and second radiation doses can be totalized. Testicle weight changes for animals exposed to (200 r + 200 r) and (400 r + 200 r) are the same with 3 to 4 week intervals between the fractional radiation doses as for animals exposed to single 400 r and 600 r doses. 49 to 140 days after 200 r exposure, testicle radiosensitivity is the same as in control animals. 49 to 70 days after 400 r exposure, testicle radiosensitivity is restored to the initial level, but after 98 to 140 days radiosensitivity increases again. Testicle regeneration processes are considerably retarded compared to regeneration processes of the organism as a whole. The different reaction of testicles to fractional radiation doses may be attributed to a specific radiosensitivity caused by slower regenera-

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ACCESSION NR: AP4015098

tion processes. The authors "express profound gratitude to Academician N. I. Nuzhdin for guidance and assistance in carrying out this study." Orig. art. has: 4 figures and 1 table.

ASSOCIATION: Institut genetiki AN SSSR, Moscow (Institute of Genetics, AN SSSR)

SUBMITTED: 11Sep62 DATE ACQ: 12Mar64 ENCL: 00

SUB CODE: LS NR REF SOV: 004 OTHER: 014

Card 3/3

L 8240-66 EWT(m)

ACC NR: AT5024249 SOURCE CODE: UR/2670/65/000/032/0162/0176

27

B+1

AUTHOR: Pomeranseva, M. D.; Ramayya, L. K.

ORG: Institute of Genetics, Academy of Sciences SSSR (Institut genetiki, Akademiya nauk SSSR)

TITLE: The RBE of various types of ionizing radiation: Injury 19 to the testes and incidence of dominant lethal mutations in the sexual cells of mice

SOURCE: AN SSSR. Institut genetiki. Trudy, no. 32, 1965. Deystviye ioniziruyushchikh izlucheniy na rastitel'nyy i zhivotnyy organizmy (Effect of ionizing radiation on plant and animal organisms), 162-176

TOPIC TAGS: radiation biologic effect, relative biologic efficiency, biologic mutation, animal genetics, biologic reproduction

ABSTRACT: A comparative study was made of the RBE of different types of radiation with respect to mutagenic and injurious effects on animal testes. White mice of both sexes, aged 2.5—4 months, were used in this series of experiments. Males only were subjected to neutron irradiation in doses of 17, 34, 57, 114, 171, and 228 rad. Irradiation with 660-Mev protons was conducted in the following dose range: 100, 200, 400, 600, 800, 1100, and 1300 rad (dose powers, 85—947 rad/min).

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ACC NR: AT5024249

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Animals were irradiated with gamma rays in doses of 50, 150, 300, 450, 600, 800, and 1000 rad in dose powers of 7—260 rad/min. X-ray irradiation was conducted in doses of 20, 50, 100, 200, 300, 400, 600, 800, and 1600 rad with dose powers of 3.7—120 rad/min. Animals were killed on the 28th—30th day after irradiation. Experimental results showed that fast neutrons were 5—6 times more effective than Co^{60} gamma rays in causing genetic injury (dominant lethal mutations in spermatozoa) and in the degree of injury to testes. Fast neutrons were almost 4 times as effective as x-rays in this respect. According to these indices, 660-Mev protons are approximately half as effective as x-rays. The RBE of protons as compared with gamma rays is 0.6—0.7. The RBE of gamma rays, in turn, is 0.6—0.7 as compared with 190-kv x-rays. It was discovered that in the dose ranges used, the dependence on the dose of the frequency of appearance of dominant lethal mutations in spermatozoa and spermatids is close to exponential with all these types of radiation. As could be expected from other experiments described in this collection of articles, spermatids turned out to be 2.5 times more radiosensitive (genetically) than spermatozoa when irradiated with protons and gamma rays, and 1.8 times more radiosensitive when irradiated with fast neutrons. Thus, the RBE of neutrons, according to the index of genetic effect on spermatids, is somewhat lower than the previously quoted value. In the range of doses studied, the ratio of mutations causing embryo death prior to and after implantation is approximately

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L 8240-66

ACC NR: AT5024249

the same with all types of irradiation. It is known that RBE values vary considerably, depending on the index. The RBE of fast neutrons, for instance, is higher when evaluated with the indices considered in this work than when evaluated by $LD_{50/30}$, while for protons and gamma rays the RBE values are approximately the same in both cases. Orig. art. has: 7 figures and 5 tables. [JS]

SUB CODE: LS/ SUBM DATE: none/ ORIG REF: 022/ OTH REF: 023

Card 3/3

L 8204-66 EWT(m)

ACC NR: AT5024251 SOURCE CODE: UR/2670/65/000/032/0192/0199

23

B+1

AUTHOR: Pomerantseva, M. D.; Ramayya, L. K.

ORG: Institute of Genetics, Academy of Sciences SSSR (Institut genetiki, Akademiya nauk SSSR

TITLE: Radiosensitivity of the testes in newborn mice

19

SOURCE: AN SSSR. Institut genetiki. Trudy, no. 32, 1965. Deystviye ioniziruyushchikh izlucheniy na rastitel'nyy i zhivotnyy organizmy (Effect of ionizing radiation on plant and animal organisms), 192-199

TOPIC TAGS: radiation biologic effect, biologic reproduction, animal physiology, mouse, spermatogenesis

ABSTRACT: In this group of experiments, newborn, male, white mice (1 day old) were subjected to x-ray irradiation in doses of 20—800 rad with dose powers of 4—130 rad/min. Mice were killed after 30 and 90 days, and the degree of injury to their testes from irradiation was determined. These results were compared with data obtained in previous experiments with irradiation of mature mice. It was found that the testes of newborn mice are more radiosensitive than adult gonads. This difference increases with increased radiation dose. The difference in radiosensitivity between young and adult mice was most clearly expressed

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L 8204-66

ACC NR: AT5024251

with doses above 200 rad, and is chiefly manifested in the slower recovery rate of younger animals. Comparative histological analysis of the testes of mice irradiated when newborn and adult showed that this increased radiosensitivity was characterized by the presence in 30-day old males of undifferentiated cells in the seminiferous tubules. This type of cell is completely absent in unirradiated animals of the same age. The presence of undifferentiated cells is perhaps explained by a lag in the development of the testes in irradiated animals, or it may be connected with general depression of the entire organism. In spite of their radiosensitivity, however, the testes of newborn mice have a great recovery capacity. Even with a dose of 800 rad, 3 months after irradiation all types of spermatogenic cells, including mature sperm, were found in the seminiferous tubules. During irradiation of newborn mice the dose causing irreversible suppression of spermatogenesis is considerably higher than $LD_{50/30}$ and probably even exceeds the absolute lethal dose. This experiment and others with embryos show that as the testes develop and differentiation of sexual cells takes place, their recovery capacity after irradiation increases. Orig. art. has: 4 figures and 3 tables. [JS]

SUB CODE: LS/ SUBM DATE: none/ ORIG REF: 007/ OTH REF: 007

nw

Card 2/2

RAMAZAN, I.

Local power system of Kirghizia under conditions of connecting them to the main power system. Trudy Inst. vod. khoz. i energ. AN Kir. SSR no.4:227-238 '57. (MIRA 10:12)
(Kirghizistan--Electric power)

RAMAZAN, F.S., Cand Tech Sci -- (diss) "Regulating of the Frequency in local ~~hydroelectric~~ Systems and their power engineering Characteristics (~~for~~ example ~~in the regions~~ of KiSSR)." Frunze, 1958, 20pp with graphs (Acad Sci KiSSR, Inst of Power Engineering and Water ~~Management~~), 150 copies. (KL, 41-58, 121)

1. LUGOVOY, V.S.: RAMAZAN, M.

2. USSR (600)

4. Kirghizistan - Hydroelectric Power

7. Electrification of agriculture in Kirghizistan and its power basis.
Izv. KirFAN SSSR No. 7, 1947.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

1. LUGOVOY, V. S.: RAMAZAN, M.

2. USSR (600)

4. Electricity in Agriculture - KIRGHIZISTAN

7. Electrification of agriculture in Kirghizistan and its power basis.
Izv.KirFAN SSSR No. 7, 1947.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

1. LUGOVOY, V. S.; RAMAZAN, M.
2. USSR (600)
4. Hydroelectric Power - Kirghizistan
7. Electrification of agriculture in Kirghizistan and its power basis.
   Izv. KirFAN SSSR no. 7, 1947

9. **Monthly List of Russian Accessions**, Library of Congress, January 1953. Unclassified.

1. LUGOVOY, V. S.: RAMAZAN, M.

2. USSR (600)

4. Kirghizistan - Electricity in Agriculture

7. Electrification of agriculture in Kirghizhistan and its power basis.
Izv. KirFAN SSSR No. 7, 1947.

9. *Monthly List of Russian Accessions*, Library of Congress, January 1953. Unclassified.

RAMAZAN, M.S.

Winter operation of rural hydroelectric power stations in Kirghizistan. Izv. AN Kir. SSR. Ser. est. i tekh. nauk 4 no.5: 139-155 '62. (MIRA 16:4)

(Kirghizistan—Hydroelectric power stations—Cold weather conditions)

ARTAMONOV, K.F.; RAMAZAN, M.S.; SATARKULOV, S.S.; TALMAZA, V.P.

Water intakes for mountainous sections of rivers. Izv.AN Kir. SSR. Ser. est. i tekh. nauk 5 no.3:53-69 '63. (MIRA 16:11)

ARTAMONOV, K.F.; RAMAZAN, M.S.; SATARKULOV, S.S.

Improved gratings of water intakes. Izv.AN Kir. SSR. Ser. est. i tekh. nauk 5 no.3:71-77 '63. (MIRA 16:11)

RAMAZAN, M.S.

Using a water intake with a surface water retaining culvert.
Izv.AN Kir. SSR. Ser. est. i tekh. nauk 5 no.3:147-157 '63.
(MIRA 16:11)

RAMAZAN, M.S.

Winter regime of small watercourses in Kirghizistan. Trudy Inst. vod.khoz.i energ. AN Kir.SSR no.1:119-130 '54. (MLRA 9:11)
(Kirghizistan--Rivers)

KABAKOV, M.M., kand. tekhn. nauk; KAZAROV, M.I., kand. tekhn. nauk; ZHAROVA, K.A., nauchnyy sotr.; KAPLINSKIY, M.I., kand. tekhn. nauk; ARTAMONOV, K.F., kand. tekhn.nauk; RAMAZAN, M.S., kand. tekhn. nauk; KOSTYUCHENKO, E.V., kand. tekhn. nauk; TESLENKO, V.G., nauchnyy sotr.; TERESHCHENKO, V.S.,nauch.sotr.;TAIMAZA,V.F.; LEVITUS, B.I., red. izd-va; ANOKHINA, M.G., tekhn. red.

[Field investigation of irrigation systems]Proizvodstvennye issledovaniia na orositel'nykh sistemakh. Frunze, Izd-vo AN Kirgizskoi SSR, 1961. 302 p. (MIRA 15:9)

1. Akademiya nauk Kirgizskoy SSR, Frunze. Institut energetiki i vodnogo khozyaystva.

(Kirghizistan--Irrigation)

ARTAMONOV, K.F.; RAMAZAN, M.S.; TALMAZA, V.F.

Use of water intakes with bottom racks in Kirghizistan.
Trudy Inst. vod. khoz. i energ. AN Kir. SSR no.6:75-99 '59.
(MIRA 15:5)

(Kirghizistan--Water-supply engineering)

RAMAZAN, M.S.

Results of winter operation of agricultural hydroelectric power stations of Kirghizia. Trudy Sekt.vod.khoz. KirFAN SSSR no.3:87-104 '51. (MLRA 8:1)

(Kirghizistan--Hydroelectric power stations)

LUGOVOY, V.S.; RAMAZAN, M.S.

New type of continuous water intake installation for mountain streams. Trudy Sekt.vod.khoz.KirFAN SSSR no.2:61-68 '50.
(Hydraulic engineering) (MLRA 8:1)

L 46035-66 EWT(m)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AR6013641 SOURCE CODE: UR/0058/65/000/010/D058/D058

36
B

AUTHOR: Ramazanov, A. Sh.; Fishman, I. S.

REF SOURCE: Sb. Itog. nauchn. konferentsiya Kazansk. un-ta za 1963 g. Sekts.: paramagnitn. rezonansa, spektroskopii i fiz. polimerov, radiofiz., astron., bion. Kazan, 1964, 56-61

TITLE: Spectral method of determining thickness of gold and palladium coatings

SOURCE: Ref. zh. Fizika, Abs. 10D421

TOPIC TAGS: spectral line, metal coating, GOLD, PALLADIUM

TRANSLATION: The thickness of gold and palladium coatings, in the range of 2-5 μ, deposited on small bronze and brass parts coated with 15 μ of silver was determined. The method is based on determining (with the help of a standard) the differences in the degree of blackening between the Au or Pd and the Ag substrate lines. A localized spark generator is used for the spectrum excitation. The average deposition thickness is obtained from the localized thickness measurements by means of empirical coefficients, experimentally obtained for differently shaped parts.

SUB CODE: 14/ SUBM DATE: none

Card 1/1 awm

RAMAZANOV, D.

Use of salt-gels gives considerable economy. Neftianik 7 no.4:23 Ap '62. (MIRA 15:11)

1. Glavnyy inzh. Belebeyevskoy kontory bureniya.
(Oil well drilling fluids)

LATYPOV, E.K.; ZARIPOV, S.Z.; RAMAZANOV, D.Sh.

Using hydraulic mixers in test drilling in Bashkiria. Neft. khoz. 38 no.11:26-30 N '60. (MIRA 14:4)
(Bashkiria—Mixing (Machinery))

RAMAZANOV, K.A.

Some improvements of the manufacturing technology and betterment of the quality of electrophotographic layers. Zhur.[illegible]uch.i prikl. fot.i kin. 6 no.6:440-447 N-D '61. (MIRA 15:1)
(Xerography)
(Selenium)

RAMAZANOV, K.A.

Electrical properties of alloys of the system bismuth - antimony in thin layers. Fiz. tver. tela 3 no.8:2259-2263 Ag '61.
(MIRA 14:8)

(Bismuth-antimony alloys--Electrical properties)

RAMAZANOV, M.D. (Moskva)

Boundary value problem for a certain type of differential equations. Mat. sbor. 64 no.2:234-261 Je '64.

(MIRA 17:9)

RAMAZANOV, M.D.

Type LP solutions to parabolic equations. Dokl. AN SSSR 161 no.3:530-533 Mr '65. (MIRA 18:4)

1. Moskovskiy gosudarstvennyy universitet. Submitted November 19, 1964.

NUVAR'YEVA, V.V.; RAMAZANOV, P.Ye.

Temperature dependence of the electroluminescence of zinc sulfide phosphors. Izv.vys.ucheb.zav.; fiz. no.3:113-116 '63.

Relation between electroluminescence and thermoluminescence. Ibid.: 116-118 (MIRA 16:12)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni Kuybysheva.

RABOTKINA, L.R.; RAMAZANOV, P.Ye.

Build-up of the electroluminescence of ZnS-Cu,Al phosphor.
Opt. i spektr. 18 no.6:1031-1034 Je '65.
(MIRA 18:12)

ACCESSION NR: AP4042983 S/0051/64/017/001/0082/0086

AUTHORS: Nuvar'yeva, V. V.; Ramazanov, P. Ye.

TITLE: Temperature dependences of the electroluminescence of ZnS-Cu,Al phosphors

SOURCE: Optika i spektroskopiya, v. 17, no. 1, 1964, 82-86

TOPIC TAGS: temperature dependence, electroluminescence, light excitation, luminescence quenching, luminor, zinc oxide optic material

ABSTRACT: In an attempt to establish a connection between the temperature dependences and the phosphor capture levels, primarily the levels that are manifest by thermal de-excitation, the authors investigated three ZnS-Cu,Al phosphors excited by fields of different frequency and intensity, and the thermal de-excitation of these phosphors following such an electric excitation at a temperature -180C. It is shown that an additional high-temperature peak appears

ACCESSION NR: AP4042983

on the temperature-dependence curve under certain conditions, and a tentative explanation of the peak is offered. It is suggested that localization levels of various depths participate in the determination of the temperature dependence, and the character of the frequency shift of various sections of the temperature dependence curves (higher temperatures correspond to higher activation energies) is offered as evidence in favor of this hypothesis. It is concluded that all the capture centers of the phosphor participate in the determination of the temperature dependence of the glow of the phosphor, and that the electric field plays a major role in the liberation of the charges from these capture centers at sufficiently high field intensities. Orig. art. has: 5 figures and 1 table.

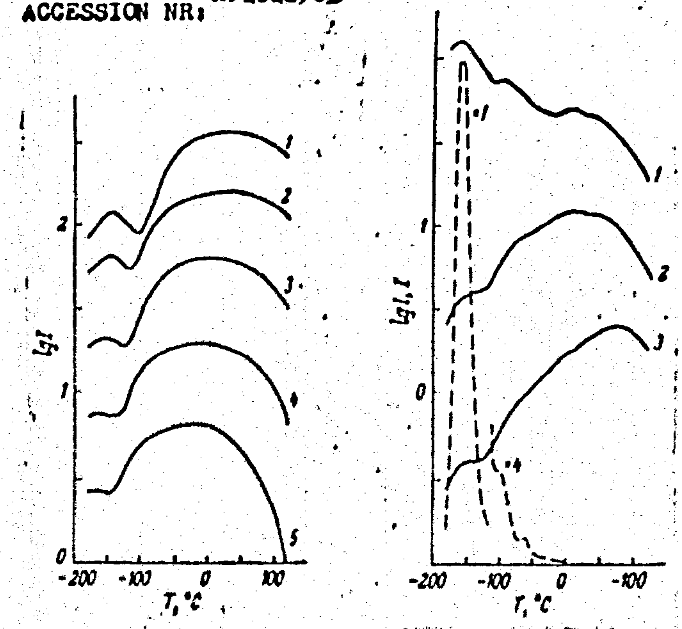
ASSOCIATION: None

SUBMITTED: 07Oct63 ENCL: 02

SUB CODE: OP NR REF SOV: 003 OTHER: 002

ACCESSION NR: AP4042983

ENCLOSURE: 01



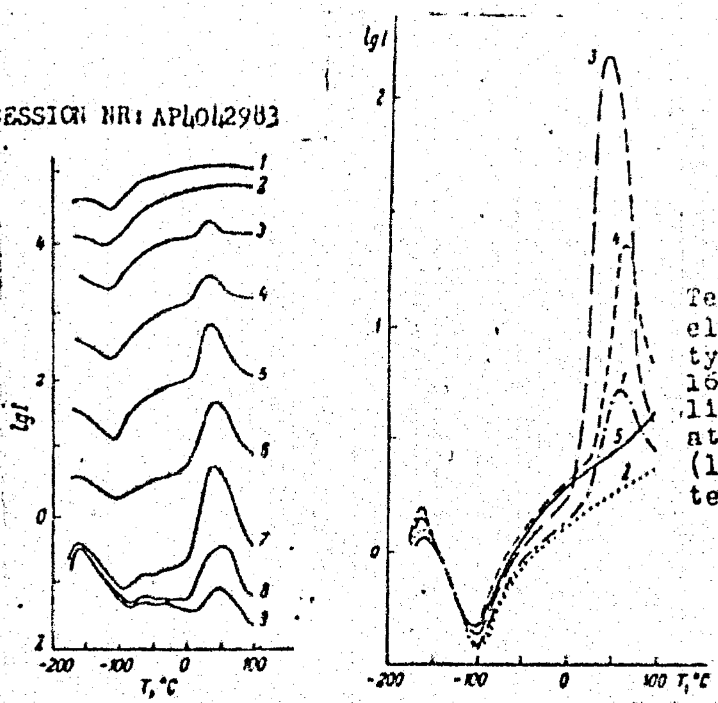
Temperature dependences of electroluminescence of two types of ZnS-Cu,Al phosphors (EL-510 - right, 336g - left) for different frequencies (left) and for different emission bands (right).

Dashed curve (right) - de-excitation curve.

Card 3/4

ACCESSION NR: AP4012983

ENCLOSURE: 02



Temperature dependences of electroluminescence of one type of phosphor (125e) at 1620 cps, following preliminary excitation, obtained at different voltages (left) and at different temperatures (right)

Card 4/4

L 2823-66 EWT(1)/EWT(m)/EWP(t)/EWP(b) IJP(c) JD

ACCESSION NR: AP5016176 UR/0051/65/018/006/1031/1034
535.376

44,55 42

AUTHORS: Rabotkina, L. R.; Ramazanov, P. Ye. 44,55 B

17

TITLE: Buildup of electroluminescence of the phosphor ZnS-Cu,Al

21,44,55

SOURCE: Optika i spektroskopiya, v. 18, no. 6, 1965, 1031-1034

17

TOPIC TAGS: luminor, zinc compound, optic material, electroluminescence

ABSTRACT: The purpose of the investigation was to obtain information on the capture centers of electroluminors and on their role in the mechanism of electroluminescence by determining the buildup of electroluminescence brightness waves in an unexcited phosphor over a wide temperature and time interval. A thin layer of phosphor, 25 μ thick, was excited with an alternating electric field of rectangular waveform, with amplitude 100 V and frequency 0.01--100 cps. The luminescence buildup was recorded with an oscilloscope during the first hundred cycles of the field, and then following 20 and 40 seconds and

Card 1/2

L 2823-66

ACCESSION NR: AP5016176

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1 and 3 minutes after the start of the excitation. The results show that the buildup of electroluminescence takes place in two stages. The first terminates within the first 7--10 cycles, and the second proceeds at a slower rate. This buildup by stages is related to the existence of several groups of localization levels in the phosphor. The complicated energy spectrum of the capture levels participating in the electroluminescence also gives rise to an irregular structure on the temperature dependence of the amplitude of the brightness waves, plotted at different instants of luminescence buildup. Orig. art. has: 3 figures

ASSOCIATION: None

SUBMITTED: 29Apr64

ENCL: 00

SUB CODE: OP

NR REF SOV: 003

OTHER: 000

BVK

Card 2/2

L 41364-65 EPR/EWT(l)/EWT(m)/EWP(b)/EWP(t) Pi-4/Ps-4 IJP(c) JD/JG
ACCESSION NR: AP5003043 S/0051/65/018/001/0164/0167

AUTHOR: Nuvar'yeva, V. V.; Ramazanov, ~~P. Ye.~~ 24

21 27 27 B

TITLE: Stored light sums in electroluminescent ZnS-Cu, Al

SOURCE: Optika i spektroskopiya, v. 18, no. 1, 1965, 164-167

21 27

TOPIC TAGS: zinc-sulfide optical material, electroluminescence, light sum, luminor/ 125c, 336g, EL-510

ABSTRACT: Continuing earlier investigation on one type (125c) of ZnS-Cu, Al phosphor (Opt. i spektr. v. 12, 529, 1962), the authors measured the light sums thermally emitted by either electroluminors ZnS-Cu, Al (336g and EL-510) after excitation with fields at different frequencies and with different voltages on the electroluminescent capacitor. The general character of the curves obtained for the phosphors confirm the results obtained earlier. Since the phosphors 336g and EL-510, unlike 125c, have a rather strong blue band in addition to the green luminescence band, the authors investigated the total spectrally-unseparated light sums as well as the light sums separately radiated in the blue and green bands. It was established that both light sums have the same voltage dependence.

Card 1/2

L 41364-65
ACCESSION NR: AP5003043

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More detailed results are presented in the article for the total spectrally-unseparated radiation. It is concluded that the dependence of the light sum on the voltage and on the frequency of the electric field is a general law that reflects the filling of the localization levels in electroluminescence and the depletion of these levels under the influence of the electric field. The voltage dependence of the light sum is similar to the voltage dependence of the electroluminescence yield, but it is not clear whether this is an accident or due to a single law that governs both the light sum and electroluminescence yield. Orig. art. has: 4 figures and 2 formulas.

ASSOCIATION: None

SUBMITTED: 07Mar64 ENCL: 00 SUB CODE: OP

NR REF SOV: 003 OTHER: 001

cc
Card 2/2

RAMAZANOV, P.Ye.; NUVAK'YEVA, V.V.

Light sums stored in a ZnS-Cu, Al electroluminophor. Opt.i spektr. 7 no.4:529-531 Ap '62. (MIRA 15:5)

(Luminescent substances)

37225
S/051/62/012/004/013/015
E 039/E485

24.3500

AUTHORS: Ramazanov, P.Ye., Nuvar'yeva, V.V.

TITLE: On the lightsums stored in the ZnS-Cu, Al luminophor

PERIODICAL: Optika i spektroskopiya, v.12, no.4, 1962, 529-531

TEXT: It is assumed that the lightsums stored in a luminophor when excited by electric fields has some influence on the intensity of its luminescence. The nature of the effect is not clear and therefore an investigation was made to estimate the comparative lightsums stored in the ZnS-Cu, Al luminophor for different levels of preliminary excitation. The phosphor was excited at 100°K by electric fields of frequency 60 to 4860 c/s with voltages on the luminophor condenser of 200 to 1000 V. The lightsums were then determined from thermal glow measurements. The thermal glow curves showed a peak with a maximum at 113 to 123°K and a very weak peak near 238°K. For excitation at 60 c/sec, the maximum in the thermal glow curve is displaced by 10° to the high temperature side as the voltage is increased from 400 to 1000 V; while at 4860 c/sec, there is little change with voltage. The dependence of the intensity of luminescence on the excitation

Card 1/2

S/051/62/012/004/013/015
E039/E485

On the lightsums ...

voltage is given by the formula

$$I = Ae^{\frac{-b}{\sqrt{U}}}$$

where U is the voltage and A and b are constants. In general, it is shown that the lightsums increase with voltage at low frequencies while at high frequencies they pass through a maximum (at 500 V for 4860 c/s) and then decrease with increasing voltage. There are 2 figures.

SUBMITTED: October 9, 1961

Card 2/2

LITVINOVA, P.S.; RABOTKINA, L.R.; RAMAZANOV, P.Ye.

Investigation of the initial stages of the electroluminescence of ZnS-Cu, Al phosphor. Opt. i spektr. 11 no.2:264-265 Ag '61. (MIRA 14:8)

(Zinc sulfide)
(Phosphors)

RAMAZANOV, P.Ye.; NUVAR'YEVA, V.V.

Use of an MF-4 microphotometer in recording slow processes. Izv. vys. ucheb. zav.; fiz. no. 3:165-166 '64. (MIRA 17:9)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni Kuybysheva.

MUVAR'YEVA, V.V.; RAMAZANOV, P.Ye.

Temperature dependence of the electroluminescence of ZnS-Cu, Al phosphors. Opt. i spektr. 17 no.1:82-86 Jl '64.
(MIRA 17:9)

EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6011558 SOURCE CODE: UR/0051/66/020/003/0467/0471

AUTHORS: Rabotkina, L. R.; Ramazanov, P. Ye.

71
68
B

ORG: none

TITLE: Low frequency electroluminescence of the phosphor ZnS-Cu,Al

27

SOURCE: Optika i spektroskopiya, v. 20, no. 3, 1966, 467-471

TOPIC TAGS: zinc sulfide, optic material, electroluminescence, temperature dependence, frequency characteristic, carrier lifetime, phosphor

ABSTRACT: The authors investigated the temperature and frequency dependences of the amplitudes of the brightness waves of the phosphor by exciting the latter in the frequency range from 0.01 to 100 cps in two capacitors with different dielectrics. Various waveforms of the exciting voltage were used. Under these conditions the phosphor had practically only one green emission band, which was the only one investigated. The form of the brightness wave of the electroluminescence was found to be dependent on the waveform of the exciting voltage. A square wave gave rise to maxima corresponding to the voltage reversal. Sinusoidal or saw-tooth excitation resulted in more complicated brightness waves. The character of the temperature dependence as a function of the frequency

Card 1/2

UDC: 535.376

2

L 26714-66 3

ACC NR: AP6011558

(and also of the temperature variation of the frequency dependence) was found to be on the whole the same as for the average electroluminescence brightness at higher temperatures. Differences were observed, especially with respect to secondary peaks, in the two capacitors used for the excitation, in which the phosphor was differently imbedded in the dielectric. The results are interpreted on the basis of an assumption that all the changes occurring in the phosphor, as well as the relaxation of the frequency dependence during the excitation of the glow, are connected with the lifetime of the carriers at different types of traps. The authors thank M. P. Furman and G. G. Vergun for preparing the enamel electroluminescent capacitors, and also B. V. Nuvar'yeva for a discussion of the results. Orig. art. has: 5 figures and 1 formula.

SUB CODE: 20/ SUBM DATE: 14Dec64/ ORIG REF: 004/ OTH REF: 002

Card 2/2

RAMAZANOV, R. A.; BEL'TSOVA, A. M.

Designing stop devices for the well-head equipment of flowing wells sealed with special lubricants. Gaz. delo no. 11:13-18 '63. (MIRA 17:5)

1. Azerbaydzhanskiy nauchno-issledovatel'skiy institut neftyanogo mashinostroyeniya.

RAMAZANOV, R.A.

Tightness calculation of flanged couplings of equipment for hermetic sealing of a flowing-well mouth. Za tekh. prog. 3 no.7:27-31 Jl '63. (MIRA 16:12)

1. Azerbaydzhanskiy nauchno-issledovatel'skiy institut neftyanogo mashinostroyeniya.

[illegible] EY [illegible]

[illegible] of free-flowing [illegible].
[illegible] '61. (MIRA 14:10)

[illegible] nauchno-issledovatel'skogo
[illegible] mashinostroyeniya.
[illegible]--Equipment and supplies)

RAMAZANOV, R.A.; MAYDEL'MAN, N.M.

Safety factor of christmas-tree elements. Mash. i neft. obor. no.7:22-24 '64. (MIRA 17:11)

1. Azerbaydzhanskiy nauchno-issledovatel'skiy institut neftyanogo mashinostroyeniya.

RAMAZANOV, R.A.

New metal linings for super high pressure flanged joints. Azerb. neft. khoz 40 no.11:40-42 N '61. (MIRA 15:1)
(Petroleum industry--Equipment and supplies) (Couplings)

L 53602-65 EWG(j)/EPA(s)-2/EWP(e)/EWT(m)/EPF(c)/EWP(i)/EPF(n)-2/EPR/EWP(j)
FCS(f)/EWP(t)/EPA(bb)-2/EWP(b) Pc-4/Pr-4/Ps-4/Pt-7/Pu-4 IJP(c)/RPL JD/
WW/JG/DJ/RM/WH

ACCESSION NR: AP5010982 UR/0318/65/000/004/0022/0025

65

AUTHORS: Fuks, I. G.; Ramazanov, R. A.; Vaynshtok, V. V.; Bel'tsova, A. M. 63

TITLE: Mass-mechanical and sealing properties of lithium packing greases 0

SOURCE: Neftepererabotka i neftekhimiya, no. 4, 1965, 22-25

TOPIC TAGS: sealing compound, packing material, grease, lithium compound, mineral oil, polymethacrylate 27

ABSTRACT: This paper presents the first results of experimental studies designed to find the relations between sealing properties of packing greases and their mass-mechanical properties. The greases on two types of devices were tested, one providing stoppage of rectilinear-flow movement, the other furnishing spigot-type cutoff. Lithium packing grease, with and without filler, prepared with castor oil and with S-110 and S-220 mineral oils, were tested. Mica and graphite, ranging in grain size from 20-40 mμ to about 300 mμ, and MgO were used as fillers. Greases with polymethacrylate were also tested. Tests were made in kerosene at room temperature. Increase in lithium stearate from 15 to 30% in greases from S-220 oil led to marked increase in ultimate strength and effective viscosity, but had no appreciable effect on sealing. Grease from

Card 1/2

L 53602-65

ACCESSION NR: AP5010982

2

S-110 at same concentrations had somewhat lower rheological parameters, but had better sealing capacity, the capacity increasing slightly with increase in stearate. Different fillers had little effect on rheological properties of samples of lithium greases. Addition of polymethacrylate gave no positive results; the grease had lower sealing capacity than grease with filler. Increase in filler concentration, regardless of filler material, led to marked increase in shear strength and viscosity. Finer grain size of mica filler caused increase in mass-mechanical properties, but no such change was observed with graphite. The sealing capacity was found to depend strongly on size of filler particle, much less on concentration of filler. Mica, regardless of oil base, gave grease with the most stable sealing capacity. The authors conclude that the relations investigated are complex and that further work is necessary before precise conclusions can be drawn. Orig. art. has: 4 tables.

ASSOCIATION: MINKh; GP

SUBMITTED: 00 ENCL: 00 SUB CODE: MT, FP

NO REF SOV: 006 OTHER: 000

Card 2/2

L 53602-65 EWG(j)/EPA(s)-2/EWP(e)/EWT(m)/EPF(c)/EWP(i)/EPF(n)-2/EPR/EWP(j)
FCS(f)/EWP(t)/EPA(bb)-2/EWP(b) Pc-4/Pr-4/Ps-4/Pt-7/Pu-4 IJP(c)/RPL JD/
WW/JG/DJ/RM/WH

ACCESSION NR: AP5010982 UR/0318/65/000/004/0022/0025

65

AUTHORS: Fuks, I. G.; Ramazanov, R. A.; Vaynshtok, V. V.; Bel'tsova, A. M. 63

TITLE: Mass-mechanical and sealing properties of lithium packing greases B

SOURCE: Neftepererabotka i neftekhimiya, no. 4, 1965, 22-25

21

TOPIC TAGS: sealing compound, packing material, grease, lithium compound, mineral oil, polymethacrylate

ABSTRACT: This paper presents the first results of experimental studies designed to find the relations between sealing properties of packing greases and their mass-mechanical properties. The greases on two types of devices were tested, one providing stoppage of rectilinear-flow movement, the other furnishing spigot-type cutoff. Lithium packing grease, with and without filler, prepared with castor oil and with S-110 and S-220 mineral oils, were tested. Mica and graphite, ranging in grain size from 20-40 $m\mu$ to about 300 $m\mu$, and MgO were used as fillers. Greases with polymethacrylate were also tested. Tests were made in kerosene at room temperature. Increase in lithium stearate from 15 to 30% in greases from S-220 oil led to marked increase in ultimate strength and effective viscosity, but had no appreciable effect on sealing. Grease from

Card 1/2

L 53602-65

2

ACCESSION NR: AP5010982

S-110 at same concentrations had somewhat lower rheological parameters, but had better sealing capacity, the capacity increasing slightly with increase in stearate. Different fillers had little effect on rheological properties of samples of lithium greases. Addition of polymethacrylate gave no positive results; the grease had lower sealing capacity than grease with filler. Increase in filler concentration, regardless of filler material, led to marked increase in shear strength and viscosity. Finer grain size of mica filler caused increase in mass-mechanical properties, but no such change was observed with graphite. The sealing capacity was found to depend strongly on size of filler particle, much less on concentration of filler. Mica, regardless of oil base, gave grease with the most stable sealing capacity. The authors conclude that the relations investigated are complex and that further work is necessary before precise conclusions can be drawn. Orig. art. has: 4 tables.

ASSOCIATION: MINKh; GP

SUBMITTED: 00 ENCL: 00 SUB CODE: MT, FP

NO REF SOV: 006 OTHER: 000

Card 2/2

ACC NR: AT7002004 (N) SOURCE CODE: UR/2563/66/000/262/0026/0034

AUTHOR: Serenko, A. N.; Ramazanov, S. Kh.

ORG: None

TITLE: Investigation of the effect of welding stresses on the carrying capacity of welded elements made from titanium alloy under static and cyclic loading

SOURCE: Leningrad. Politekhnicheskiy institut. Trudy, no. 262, 1966. Svarochnoye proizvodstvo (Welding), 26-34

TOPIC TAGS: titanium welding, metal stress, stress distribution, alloy heat treatment

ABSTRACT: Experiments are conducted to determine the effect of residual stresses on the strength properties of welded elements and structures made from titanium alloys. The shape and dimensions of the specimen used for both static and cyclic tests are shown in Figure 1. All specimens were cut from a single rolled titanium sheet with orientation of the longitudinal axis of the specimen along the rolling direction. The residual stresses in the specimen are shown as a function of distance of the pick-up from the axis of the joint. This figure shows that the maximum residual tensile stresses are 50 kg/mm^2 which is considerably below the yield stress of the base metal (75 kg/mm^2). Residual stresses were relieved by placing the specimens in a furnace preheated to 200°C with subsequent heating to 630°C and holding for two hours after

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ACC NR: AT7002004

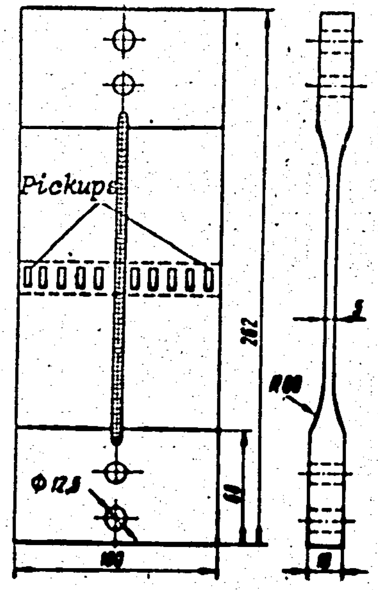

Fig. 1

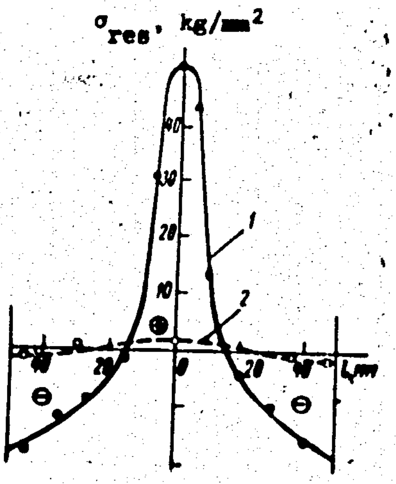

Fig. 2. 1--after fusion; 2--after heat treatment

Card 2/3

ACC NR: AT7002004

which the specimens were cooled together with the furnace to 200°C and then removed and cooled to room temperature. As shown by the broken curve in Figure 2, this treatment is extremely effective although the stress distribution retains its original nature. The results of static tensile tests of specimens in various states showed practically identical mechanical characteristics regardless of internal stresses. On the other hand, it was found that the cyclic strength of titanium specimens without heat treatment is sharply reduced by welding. Thus heat treatment should be provided to relieve residual stresses in welded titanium structures designed for operation under cyclic loading conditions. Orig. art. has: 5 figures, 3 tables, 2 formulas.

SUB CODE: 13, 11/ SUBM DATE: None/ ORIG REF: 002/ OTH REF: 001

Card 3/3

RAMAZANOV, Ye.

Botanical terminology. Vest. AN Kazakh. SSR 17 no.9:34-38
S '61. (MIRA 16:8)

ARYSTANGALIYEV, S.; RAMAZANOV, Ye.

Materials for a botanical dictionary. Trudy Inst. bot. AN Kazakh. SSSR 11:241-269 '61. (MIRA 15:3)
(Kazakhstan--Botany--Dictionaries)